

## Extent of Adoption of Computerized Accounting System by Small and Medium Scale Enterprises for efficient business operations in Niger State, Nigeria

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**ABSTRACT:** This research investigates the extent of adoption of computerized accounting system by small and medium scale enterprises (SMEs) in Niger State, Nigeria. Five research questions and five hypotheses guided the study. Survey research design was adopted for the study. The population of the study was 134 (CEOs of SMEs) in three districts in Niger State, namely Minna, Bida and Suleja Districts. Questionnaires were used for data collection. The instrument was validated by three lecturers believed to be experts in Business education. Cronbach Alpha Reliability method was used to test the internal consistency of the items and a reliability coefficient of 0.87 was obtained. Data gathered were coded and analyzed using descriptive statistics, linear regression analysis, Pearson Correlation analysis and Analysis of Variance (ANOVA). The study reveals that CAS adoption rate in SMEs in Niger State is high. Results from the analysis also shown the significant of independent variables and proved the relationships have been substantiated to the dependent variable which contribute to the usage of CAS adoption between SMEs in Niger State. The findings indicate that CEO innovativeness; perceive ease of use and business competitiveness negatively correlated to the adoption of CAS. Results also reveals that only perceive usefulness are significantly positive correlated to CAS adoption. Therefore it can be deduced that adoption of CAS among SMEs in Niger State is caused by its usefulness. The findings reveal that types of business and business location influence the adoption of CAS. However, size (paid up capital, sales turnover and number of employee) do not influence the adoption. Results also indicate that CEO literacy on ICT, accounting and CAS has influence the responded CEO to adopt CAS in their business.

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**KEYWORDS:**

computerized accounting system, small and medium enterprise, adoption, innovativeness, business competitiveness

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### INTRODUCTION

In a dynamic world, the availability and adoption of information and communication technologies (ICTs) across the globe has altered the traditional way of conducting business operations. For example, inter and transnational trading changed dramatically to admit the increasing number of financial transactions, purchase ordering and trade-related activities that take place via the internet and technologically assisted tools. Information technology no doubt had played a major role in changing the nature of business activities and brought competitive advantages, in recent years, in small and medium scale enterprise (SMEs). The traditional way of record keeping by small and medium scale enterprises suggest that it is paper based and handle by accountants and accounting firm who prepares the annual tax return and other financial reports as the case may. Porter & Millar (2015) noted that, the introduction of new technology and more user friendly software, computerized accounting system (CAS) which is the hallmark of ICT appears to reduce the problems in accounting books record keeping practice. The authors continued that, with the new and rapid financial information, new updates and changes will be available for others in making decisions that will be profit to the business organization. Maintaining profitability through price competitiveness, quality of services and products were the target in Small and Medium Enterprises (SMEs) as a profit seeking organizations. For SMEs to survive and grow, they need rather more non-financial information such as customer behavior, market trends and price changes, than the fundamental of financial reports (Chenhall & Morris, 2016). Changes in information are constant with the changing environment. Thus, without the use of technology such as computerized accounting system, it will be more difficult for the SMEs to make a good financial decision in this era of global competitiveness. CAS usage in SMEs in general and SMEs in Niger state in particular is at the early stage as most of the firms adopt this technology within six years or less (Noor et. al., 2013). Powell and Xiao (2016) and Duchinsky and Dunn (2018) in contrast observed that UK companies adopted this system along time ago which has helped them in limiting fundamental financial accounting problems that emanates from the use of manual accounting practices. Study conducted by Joseph and Jangu (2013) in Kuching

Sarawak found that the rate of adoption of computerized accounting system is not more than 52 percent. According to the authors, shaping the future of the local economic landscape had changed dramatically and it is important that efforts should be made for a more equitable and sustainable progress towards ICT adoption by SMEs in the region. In fact, SME's are in transition, moving rapidly from "production driven" to "knowledge and information driven/based". In Niger State, SMEs play an important role by contributing to the expansion of economic activities of the state, provide value-added in the manufacturing sector, create jobs and help expand the country's export-based activities (UNDP, 2007). Furthermore, in 2013, Nigeria SMEs represent 99% of business establishments, employs more than three million workers and create a total added value of ₦54 billion (National SME Development Council, 2014). Due to increasing competition and higher demands of globalization, Niger State government have made series of attempt to lunch Small and Medium Scale Enterprise in her domain into innovative, competitive and technological driven businesses. According to the second Niger State business master Plan from year 2010 to 2030 which is geared towards achieving industrialized state status by 2030, SMEs is seen as a potential instrument in achieving such fit but not without the adoption and utilization of CAS.

Computerized accounting system is an accounting information system that processes the financial transactions and events as per Generally Accepted Accounting Principles (GAAP) to produce reports as per user requirements. (Kolo, 2020; Raymond, 2018). Every accounting system, manual or computerized, has two aspects. First, it has to work under a set of well-defined concepts called accounting principles. Another, there is a user-defined framework for maintenance of records and generation of reports. In continuation, the authors further explained that computerized accounting system is the framework of storage and processing of financial data under an operating environment that consists of hardware and software in which the accounting system works. The type of the accounting system used will be determined by the nature, and structure of the SMEs operating environment. Furthermore, the selection of both hardware and software dependent upon various factors such as the number of users, level of secrecy and the nature of various activities of functional departments in the business organization like SMEs.

Small and medium scale enterprises are sub-sectors of the industrial sector which play crucial roles in industrial development (Okanazu, 2018). To the authors, SMEs have better prospects for developing domestic economy, thereby generating the required goods and services that will propel the economy of Nigeria towards development. SMEs are broadly defined as businesses with turnover of less than 100 million naira per annum and with less than 300 full time employees (Oyeyinka, 2020). According to the author, SMEs represent about 90% of the manufacturing and industrial sector in terms of number of enterprises making it a very important part in Nigeria economy. In countries at the same level of development with Nigeria, SMEs contributes a much higher proportion to GDP than currently observed in Nigeria. In the opinion of Okanazu (2018), Small and medium scale enterprises can be seen as a seedbed of innovations, inventions and employment. Presently in Nigeria, SMEs assist in promoting the growth of the country's economy, hence all the levels of government at different times have policies which promote the growth and sustenance of SMEs. UNDP (2013) asserted that SMEs constitute essential ingredients in the lubrication and development of any economy. Though, research has shown that all these fits may not be achieved without integrating technologies into SMEs affairs. As noted by Neidleman (2019), innovativeness in business completion involves transformation of SMEs into active, dynamic and modern business organization through the adoption of CAS to enhance their financial records and books of account in order to assess the accurate profit of the entity at the end of any accounting year. Raymond (2018), noted that innovation involves coming up of ideas and bringing them to life and functional state. To the author, innovation can be seen as that change which speed up and improve the way SMEs develop and access new industrial processes and service as a result of adoption of CAS into their business operations and activities.

Furthermore, the benefits of innovation in SMEs were outline to include: effective use of human resource that is of important to the successful adoption of CAS; bringing about major changes in financial records of SMEs, and help to attain and sustained economic growth and raises standard of living. In light of recent events in the Nigeria macroeconomic environment SMEs have compelling growth potential and like other emerging economies are likely to constitute significant portion of GDP in the near future. Compared to other emerging markets, Nigeria has historically shown lack of commitment to building strong SMEs sector which is evident in poor implementation of access to finance and financial incentive to SMEs, poor provision of basic and technological infrastructure, inadequate legal and regulatory framework, poor commitment to building domestic expertise and knowledge among others. It is on this background that the researchers are determining how CAS can be adopted for business efficiency and effectiveness.

### **Purpose of the Study**

The general purpose of the study is to determine the adoption of computerized accounting system (CAS) among SMEs in Niger State, Nigeria. Specifically the study determines:

1. Observe related issues on the adoption of CAS with the CEOs of SME in Niger State.
2. Whether CEO innovativeness influences the adoption of CAS in SME in Niger State.
3. the perceived usefulness of CAS when adopted in SME in Niger State
4. Determine whether business competition influence the adoption of CAS in SME in Niger State
5. Determine whether four independent variables influence the adoption of CAS in SME in Niger State

## Research Questions

The following research questions guided the study

1. What are the observed related issues on the adoption of CAS with the CEOs of SME in Niger State?
2. How does CEO innovativeness influence the adoption of CAS in SMEs in Niger State based on their qualification?
3. What Relationship between perceive usefulness and Company usage of CAS on the perceived usefulness of CAS when adopted in SMEs in Niger State?
4. How do Business competitions influence the adoption of CAS in SMEs in Niger State?
5. How do four independent variables influence the adoption of CAS in SME in Niger State?

## Hypothesis

The following null hypothesis were tested at 0.05 level of significance

1. There is no significant difference in the mean responses of male and female CEOs on the observed related issues on the adoption of CAS in SME in Niger State.
2. There is no significant difference in the mean responses of CEOs innovativeness influence on the adoption of CAS in SMEs in Niger State based on their qualification.
3. There is no significant Relationship between perceive usefulness and Company usage of CAS
4. There is no significant difference in the mean responses of CEOs with regards to how business competitions influence the adoption of CAS in SMEs in Niger State based on age.
5. There is no significant relationship between the four independent variables with regard to their influence on the adoption of CAS in SME in Niger State.

## METHODOLOGY

The study adopted descriptive survey research design. The population of the study was 134 (CEOs of SMEs) in three districts in Niger State, namely Minna, Bida and Suleja Districts. The instrument used for data collection was a questionnaire which was validated by three lecturers believed to be experts in business education. Cronbach Alpha Reliability method was used to test the internal consistency of the items and a reliability coefficient of 0.87 was obtained. Data collection was done in two phases: questionnaire and pilot study. A structured questionnaire was mailed to the CEO (owners/managers). Data gathered were coded and analyzed using descriptive statistics, linear regression analysis, Pearson Correlation analysis and Analysis of Variance (ANOVA). Further, hypotheses developed were tested to enhance the understanding of the relationship between the variables. Statistical Package for Social Science (SPSS) 20.0 was used to formulate the data from the study. Multiple linear regression techniques were used to test the hypotheses at 0.05 level of significance.

## RESULT AND DISCUSSIONS

The results for this study were obtained based on the research questions answered and hypotheses tested. The results from research questions and hypothesis are presented in Tables 1,2,3,4,5,6 and 7

### Research Question One

1. What are the observed related issues on the adoption of CAS with the CEOs of SME in Niger State?
2. **H<sub>01</sub>:** There is no significant difference in the mean responses of male and female CEOs on the observed related issues on the adoption of CAS in SME in Niger State.

The data for answering the first research question and testing the first null hypothesis are presented in table 1.

**Table1. Significant difference of CEO observed related issues on the adoption of CAS based on gender**

	Male CEOs	Female CEOs
Male CEOs Pearson Correlation	1	-.432
Sig. (2-tailed)		.000
N	134	134
Female CEOs Pearson Correlation	-.432	1
Sig. (2-tailed)		.000
N	134	134

Correlation is significant at the 0.01 level (2-tailed)

There is a significant relationship between male and female CEOs on the observed related issues on the adoption of CAS as shown in table 1. So, we have to reject the H<sub>0</sub> hypothesis and accept the H<sub>1</sub> hypothesis. The result indicated that there was no

significance difference on the mean responses of male and female CEOs on the observed related issues on the adoption of CAS in SMEs in Niger State.  $r = -.432, p < .001$ . This explains that gender of CEO has nothing to do with observed related issues on the adoption of CAS among SMEs in Niger State. The Pearson correlation coefficient result indicated that there was a medium, negative correlation among gender of CEOs on the observed related issues on the adoption of CAS.

A good accounting system should not have any issue irrespective of gender differences of CEOs. They should give an accurate and comprehensive results of operations, which allow quick comparison between current and previous years data, offers the financial statements to be used by male and female prospective creditors, bankers and management, facilitate filing reports and tax returns to government regulatory agencies and tax-collecting, and disclosing recordkeeping error, waste, theft, and employee misconduct (Kolo, 2020). However, this study has shown that many CEOs their gender notwithstanding, simply do not keep sufficient records and as such do not benefit from the use of financial statements.

### Research Question Two

2. How does CEO innovativeness influence the adoption of CAS in SMEs in Niger State based on their qualification?

2. **H0<sub>2</sub>**: There is no significant difference in the mean responses of CEOs innovativeness influence on the adoption of CAS in SMEs in Niger State based on their qualification.

The data for answering the second research question and testing the second null hypothesis are presented in table 2.

**Table 2. Significant difference of CEO innovativeness based on qualifications**

	CEOs with Higher Qualification	CEOs with Lower Qualification
CEOs Higher Qualification Pearson Correlation	1	-.351
Sig. (2-tailed)		.000
N	134	134
CEO Lower Qualification Pearson Correlation	-.351	1
Sig. (2-tailed)		.000
N	134	134

Correlation is significant at the 0.01 level (2-tailed)

There is a significant relationship between CEO innovativeness and the adoption of CAS as shown in table 1. So, we have to reject the H<sub>0</sub> hypothesis and accept the H<sub>1</sub> hypothesis. The result indicated that there was no significance difference on the mean responses of CEO innovativeness influence on the adoption of CAS in SMEs in Niger State based on their qualification,  $r = -.351, p < .001$ . This explains that CEO innovativeness factors play a role in influencing CAS adoption among SMEs in Niger State. The Pearson correlation coefficient result indicated that there was a medium, negative correlation between CEO innovativeness and adoption of CAS. On the other hand CEO literacy on ICT, accounting and CAS do have positive relation on the adoption of CAS. This support by Cross tabulation outcome reveals that most of the CAS adopter have at least a basic knowledge and skill on ICT, accounting and CAS.

Furthermore there is no strong link between qualifications of leaders be it SMEs CEOs and technology-driven firm. According Kolo, (2020) IT implementation in small and medium scale business is more likely to be conduct by CEO (business owner), who has been conducting computer training and have their own computer efficiency IT experience. CEOs with greater knowledge in technological innovation are significantly more likely to implement an aggressive technology adoption policy.

### Research Question Three

1. What is the perceived usefulness of CAS when adopted in SMEs in Niger State?

2. **H0<sub>3</sub>**: There is no significant difference in the mean responses of CEOs perceived usefulness of CAS when adopted in SMEs in Niger State

The data for answering the third research question and testing the null hypothesis are presented in table 3.

**Table3. Relationship between perceive of influence and Company usage CAS**

	Company usage CAS	Perceive usefulness
Company usage CAS Pearson Correlation	1	.539
Sig. (2-tailed)		.000
N	134	134
Perceive usefulness Pearson Correlation	.539	1
Sig. (2-tailed)		.000
N	134	134

The figures in table 3 were analyzed using Pearson product-moment correlation coefficient. This result revealed that there was a strong, positive correlation perceive of influence and usage of CAS, ( $r=.539, p < .001$ ). This suggests that perceive usefulness have positive effects on influencing the adoption of CAS among SMEs in Niger State. Thus, the H<sub>0</sub> hypothesis rejected and accepts the H<sub>3</sub> hypothesis

According to Thong (2019), if the CEO or others members in the business has the spirit of perceived usefulness of new technologies by adopting information system or extent the adoption in information system, CEO will find solutions which he/she had understood and known that will help in achieving the objectives of the business through this new technologies. In support of this, Rogers (2013) in his innovation theory mentioned that attitude of an individual firm towards innovation usefulness, will lead to the decision of either to accept or reject an innovation and, if the decision is to adopt, there must be measures on how to implement and use the innovation in the business activity.

**Research Question Four**

1. How do Business competitions influence the adoption of CAS in SMEs in Niger State?
2. **H<sub>0</sub>4:** There is no significant difference in the mean responses of CEOs with regards to how business competitions influence the adoption of CAS in SMEs in Niger State

The data for answering the four research question and testing the null hypothesis are presented in table 4.

**Table4.** Business competitions influence the adoption of CAS in SMEs in Niger State

	Company usage CAS	Business competition
Company usage CAS Pearson Correlation	1	-.338
Sig. (2-tailed)		.000
N	134	134
Business competition Pearson Correlation	-.338	1
Sig. (2-tailed)		.000
N	134	134

Correlation is significant at the 0.01 level (2-tailed)

Relationship between business competition and usage of CAS reveals that there is a small, negative correlation between business competition and adoption of CAS, ( $r = -.338, p < .001$ ) as shown in Table 4. This suggests that business competition factors also play some role as influence factors of CAS adoption. Based on findings the H<sub>0</sub> hypothesis rejected and the H<sub>4</sub> hypothesis accepted.

In support of this, Longenecker, (2016), noted that small and medium business owners-managers are not expert in accounting but they should know the process including the financial statements and identify the best methods that can be applied in the business. This, the author noted will help them to outshine their competitors. Also maintaining sound organizational characteristics such as business size, employee’s level of IT knowledge, industry sector, business location, and information-intensity will improve SMEs business competition powers among others in a given environment. Competition may lead SMEs to the use of innovative technology. Weather the SMES are in form of wholesalers, trade associations, franchisors and voluntary groups, they are in one way other being influenced from high IT (CAS) adoption in their business operations (Treadgold, 2019). According Wenzler (2016), competition is generally believed to increase the probability of innovation adoption in case of this study (CAS). Competition led to the uncertainty of the environment and enhances both the rate and the need of adoption of innovations.

**Research Question 5:**

1. How do four independent variables influence the adoption of CAS in SME in Niger State?
2. **H<sub>0</sub>5:** There is no significant relationship between the four independent variables with regard to their influence on the adoption of CAS in SME in Niger State.

The data for answering the fifth research question and testing the fifth null hypothesis are presented in table 4.

**Table 5. Multiple linear regression – output 1**

Model Summary				
Model	R	R. Square	Adjusted R Square	Std. Error of the Estimate
1	.792	.627	.615	.24973

**Table 6. Multiple linear regression – output 2**

		ANOVA <sup>b</sup>				
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	13.515	4	3.379	54.177	.000 <sup>a</sup>
	Residual	8.045	129	.062		
	Total	21.560	133			

a. Predictors: (Constant), PEOU, PU, CEO Innovativeness, Business competition

b. Dependent Variable: Company usage CAS In term of overall significant of this model. Table 5 shows that significant model emerged (F4, 129 =54.177, p< 0.001).

Testing the influence of all four independent variable to the adoption of CAS, it is found that this model account for 61.5% of variance in the factor influence the adoption of CAS among SMEs in Niger State.

**Table7. Multiple linear regressions – output 3**

Coefficient

Coefficient	Un standardized Coefficients			Standardized	
	B	Std. Error	Beta	t	Sig.
1 (Constant)	1.662	.250	-	6.645	.000
Perceive usefulness (PU)	.035	.004	.483	8.426	.000
Business competition (BC)	-.009	.004	-.130	-2.241	.027
CEO innovativeness (CEO)	-.021	.003	-.337	-6.040	.000
Perceive ease of use (PEOU)	-.032	.005	-.377	-6.638	.000

a. Dependent Variable: Company usage CAS. The perceive usefulness, business competition, CEO innovativeness and perceive ease of use are significant variable for this model (p < 0.05). Based on regression analysis outcome, the H0 hypothesis rejected and the H<sub>5</sub> hypothesis accepted. In this study, the relationship between the independent variables and dependent variable from regression analysis is: CAS Adoption = 0.483PU - 0.130BC - 0.337CEO - 0.337PEOU (8.426) (2.241) (6.040) (6.638)

## CONCLUSIONS

Based on the findings of this study it could be generally concluded that adoption of Computerized Accounting System (CAS) in Small and Medium Scale Enterprise (SMEs) should be encouraged since it reduces a lot of abnormalities in the practices of SMEs in this challenged economy. It has become imperative for Chief Executive Officers of SMEs who intended to survive in this 21<sup>st</sup> Century of globalized economy, to acquaint themselves with innovation like computerized accounting system for self-reliant, maximization of profit, growth of the business and job creation

## RECOMMENDATIONS

From the findings of the study and conclusions drawn, the study recommended that:

1. Chief Executive Officers (CEOs) of small and medium scale enterprises (SMEs) all out in acquiring relevant innovations in their business in accounting, marketing and recording keeping practices.
2. Chief Executive Officers (CEOs) should strive for training irrespective of gender differences.

3. Chief Executive Officers (CEOs) should move towards the adoption of fully integrated accounting system in SMEs in order to meet up with global competitions

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